

Notice of Allowability

Application No.

10/792,199

Examiner

Shawn S. An

Applicant(s)

CHOI ET AL.

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/2/04 and 2/7/05.
2. ☒ The allowed claim(s) is/are 41-56.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/933,280.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted:
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 11/8, 2/7, 3/2, 6/30
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

REASONS for ALLOWANCE

Response to Preliminary Amendments

1. As per Applicant's instructions as filed on 3/02/04, claims 1-40 have been canceled, and claims 41-56 have been newly added.

Furthermore, as per Applicant's instructions as filed on 2/07/05, claims 1-40 have been canceled, and claim 41 has been amended.

Allowance of Subject Matter

2. The following is an Examiner's statement of reasons for allowance.

Claims 41-56 are allowed.

Claims 41 and 53 recite novel features of an enhanced VSB transmitter for transmitting main data and a supplemental data and a method of multiplexing main data and supplemental data, comprising:

a controller for determining multiplexing information based on amounts of the main data and the supplemental data and adding the determined multiplexing information to a reserved area of a field synchronizing signal;

a multiplexer for multiplexing the main data and the supplemental data according to the determined multiplexing information; and

a data formatter for formatting the multiplexed main and supplemental data for transmission and transmitting the formatted data to one or more VSB receivers.

Claim 46 recites novel features of an enhanced VSB transmitter for transmitting main data and a supplemental data comprising:

a VSB pre-processor for processing the supplemental data for first forward error correction (FEC) and expanding the first FEC processed data by inserting a plurality of null bits into the first FEC processed data;

a controller for determining multiplexing information based on amounts of the main data and the expanded supplemental data and adding the determined multiplexing information to a reserved area of a field synchronizing signal;

a multiplexer for multiplexing the main data and the expanded supplemental data according to the determined multiplexing information;

a VSB main processor for processing the multiplexed data for second forward error correction (FEC); and

a data formatter converter for formatting the second FEC processed data for transmitting the formatted data to one or more VSB receivers.

The prior art of record fails to anticipate or make obvious the novel features (extra emphasis added on underlined claims limitations) as discussed above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

A) Citta et al (5,602,595), ATV/MPEG Sync System.

B) Fimoff et al (5,563,884), Reducing multiplex jitter in an ATM/MPEG system.

C) Jun et al (6,810,084 B1), MPEG data frame and transmit and receive system using same.

D) Choi et al (6,947,487 B2), VSB communication system.

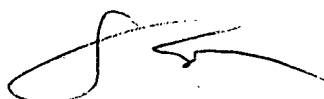
E) Choi et al (6,760,077 B2), VSB reception system with enhanced signal detection for processing supplemental data.

4. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to *Shawn S. An* whose telephone number is 571-272-7324.

5. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SHAWN AN
PRIMARY EXAMINER

7/03/07